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SECTION 3 EXISTING SERVICES

3.1. TELECOMMUNICATIONS RELAY SERVICE

Telecommunications Relay Service (TRS) is a national and international program that provides functional equivalency of access to public switched telecommunications network services by persons who are deaf, hard of hearing, or speech disabled. The basis upon which relay services work is the use of 800 number access to call center agents, called "Communications Assistants" (CAs) or "Relay Operators" (ROs) who "relay" typed messages from deaf, late deafened, hard-of-hearing, and speech disabled persons to hearing persons by speaking the contents of the typed message, and visa-versa. TRS calls can be initiated by deaf, hard of hearing or hearing persons. Equality of service for people with speech disabilities is founded on the same premise. Called "Speech to Speech" (STS) service, the CA is specially trained to understand words spoken by persons with speech disabilities when most hearing and speaking persons might not. Individuals using STS include those with cerebral palsy, Parkinson's disease, a laryngectomy, ALS, stuttering, muscular dystrophy, stroke, and other conditions affecting clarity of speech. The STS CA facilitates the conversation between people by repeating what is spoken by the person with speech disabilities.

In the United States, the Federal Communications Commission (FCC) sets minimum required standards for TRS operations, and requires and certifies that each state meets those standards. Each state is independently responsible for acquiring and administrating its own TRS. The TRS in California is called the California Relay Service (CRS). CRS is an outsourced service administrated by the Deaf and Disabled Telecommunications Program (DDTP), which in turn is overseen by the California Public Utilities Commission (CPUC). CRS is presently outsourced to two TRS vendors, MCI/WorldCom and Sprint. California is presently the only state to have more than one TRS vendor.

As of the release of this RFP, common carriers dominate the national relay service market:

<u>TRS vendor</u>	<u>Number of states + DC</u>	<u>Percent</u>
<u>population</u>		
Sprint.....	27	57.5 %
AT&T	13	19.7 %
MCI/WorldCom	1	8.3 %

Hamilton Telephone Company	5	6.1 %
SBC/Ameritech.....	3	5.5 %
Vista Technologies, Inc.	1	2.3 %
Verizon Hawaii (formerly GTE)	1	0.5 %
General Communications, Inc	1	0.2 %

In a few states, some of the TRS vendors have subcontracted out their relay call center staffing, certain specialized services (such as video relay, operator services, etcetera), training, and management operations; with networks, facilities, hardware, software and billing provided by the prime vendor.

3.2. MANDATES AND OTHER RESOURCES

The FCC has mandated rules for TRS in response to Title IV of the Americans with Disabilities Act of 1990 (ADA) and its impact upon Title 47, U.S. Code, Section 225. The FCC's mandates pertaining to TRS are contained in Title 47, Code of Federal Regulations, Part 64 with the most recent information available at the FCC's website at www.fcc.gov/cgb/dro/trs.html. The FCC's mandate that all states implement 7-1-1 dialing by October 1, 2001 to reach relay can also be found at the FCC's website. The CPUC is coordinating the implementation of 711 in California. Under the current master contract, all 711 calls will be exclusively routed to the primary CRS provider, MCI.¹

Information about TRS in California can be found at the DDTP's web site, www.ddtp.org. In addition, the major TRS vendors publish TRS information at their web sites:

Sprint: www.sprintbiz.com/gsd/sprint_relay/ and www.sprint-crs.com/
AT&T: www.att.com/relay/
MCI/WorldCom: [www.wcom/about the company/global relay/](http://www.wcom/about_the_company/global_relay/)

The generic TRS architecture recommended by the Alliance for Telecommunications Industry Solutions' (ATIS) Network Interconnection Interoperability Forum (NIIF), is described in their document, "Telecommunications Relay Service – Technical Needs" (ATIS/NIIF-0008). This document is available at www.atis.org followed by [NIIF](#) and then [Documents](#), or it is available by request to the procurement official listed in RFP Section 1.5. ATIS/NIIF is an industry-sponsored forum without regulatory authority. Although there has not been a requirement that the ATIS/NIIF recommended architecture be strictly followed in California, it is believed that the present CRS providers for the most part adhere to the recommended architecture.

California statutes regarding CRS can be found in California Public Utilities Code section 2881, referenced as a "dual-party relay system." The DDTP and its administrative oversight committee are established in California Public Utilities Code sections 270 –274 and 278.

¹ This contractual requirement is not retained in this RFP, i.e., 711 calls will be distributed among all CRS call center providers (see RFP Section 4.)

A partial list of resources associated with the California Relay Service is provided in Exhibit 3A at the end of this Section. The DDTP is not responsible for information or advice provided by these organizations. Additional resources may be found at www.ddtp.org/Cgi-bin/links.cfm.

3.3. HISTORY OF THE DDTP AND CRS

CRS began in 1987 with AT&T providing the service. AT&T had been ordered by the CPUC to provide the service in California in conjunction with all local exchange companies in the state. AT&T provided CRS until 1991 when Sprint began provision of the service under a new

contract. Sprint held that contract for five years. In 1996, MCI began providing CRS under a new Master Agreement with the DDTP, and MCI is currently the primary provider of CRS. The Master Agreement allows multiple providers of CRS in California, provided that all vendors comply with the technical requirements in the Master Agreement and agree to be reimbursed at the rate established by the DDTP. Sprint also provides CRS in California under this Master Agreement as a secondary provider. At the onset of the 1996 Master Agreement, the primary provider (MCI) was awarded use of the DDTP's existing 800 numbers for access to CRS. Presently secondary providers must establish their own toll-free numbers. Although this master agreement was set to expire October 11, 2001, the CPUC recently ordered an extension to October 11, 2001 with multiple 90-day extensions at the DDTP's option.

The DDTP's initial experience with STS was in November 1995 with a one-month trial provided by Sprint, which was the sole CRS provider at the time. Dr. Bob Segalman, the founder of STS, worked closely with the DDTP and Sprint in developing operator training procedures, call handling guidelines and protocols, and in informing potential STS users about the service.

The DDTP requested permission from the CPUC to continue the trial in 1996, and the trial service continued, provided by Sprint, from June of 1996 until December of 1997 when MCI began providing STS to California as a provisional service. STS had been included in the 1996 CRS Master Agreement, and MCI had been selected to provide the service.

3.4. CRS CALL DETAIL

Each relay call is comprised of an inbound 800 number call to the relay center, and an outbound call placed by the relay call center agent to the party that the inbound caller wishes to converse with. The most common type of relay call is between a TTY user and a voice user. Inbound CRS calls are typically placed by a person with hearing disabilities using a TTY device, or by persons without disabilities using a regular telephone. A much smaller number of calls are placed via computer modem and are referred to as ASCII calls. Relay services are offered in both English and Spanish. In addition, Speech-to-Speech relay services are also provided (see section 3.3.5.). Upon request, a complete set of CRS traffic and invoice reports from MCI and Sprint for the month of July 2001 is available from the Procurement Official listed in RFP Section 1.5.

3.4.1. Inbound CRS Calls

The DDTP has established separate 800 numbers for each type of inbound call. The DDTP's 800 numbers are presently assigned to MCI. That is, all

calls placed to the DDTP's 800 numbers are carried over MCI's network to MCI's relay call center. The DDTP's 800 numbers are:

English TTY:..... (800) 735-2929

English voice:..... (800) 735-2922

Computer or TTY via ASCII: (800) 735-0091

Spanish TTY & voice: (800) 855-3000
Speech to Speech (800) 854-7784

Computer access to MCI using the DDTP's 800 number is via ASCII protocol using 8 bit, 0 parity, 1 stop bit, half duplex. Computer access to Sprint using Sprint's own 800 number is via ASCII protocol using 8 bit, 0 parity, 1 stop bit, half duplex at 110-300 baud and 8 bit, 0 parity, 1 stop bit, full duplex at 1200-2400 baud.

Current percentages of all inbound CRS calls (handled by both MCI and Sprint), by type of 800 number, are given below.

English TTY	73.4 %
English Voice	25.1 %
Computer (ASCII)	0.7 %
Spanish TTY & voice	0.3 %
<u>Speech to Speech</u>	<u>0.5 %</u>
Total	100.0 %

Note that not all inbound calls result in outbound calls. A few inbound calls are abandoned in queue, some are wrong numbers, some are calls for directory assistance.²

Sprint advertises its own 800 numbers that provide CRS access to Sprint's network and Sprint's relay call centers. Many TTY users in California have programmed their TTYs with the DDTP's TTY 800 number. At present, approximately seventy percent of the CRS call volume is handled by MCI and thirty percent by Sprint. Only MCI presently offers STS for CRS callers.

3.4.2. Outbound CRS calls

In addition, the following types of outbound calls are placed by the relay services:

English TTY	15.1 %
English Voice	83.2 %
Computer (ASCII)	0.0 %
Spanish TTY & voice	0.4 %

² Correction: Maryland relay reports almost no wrong numbers associated with implementing 711.

<u>Speech to Speech</u>	<u>1.3 %</u>
Total	100.0 %

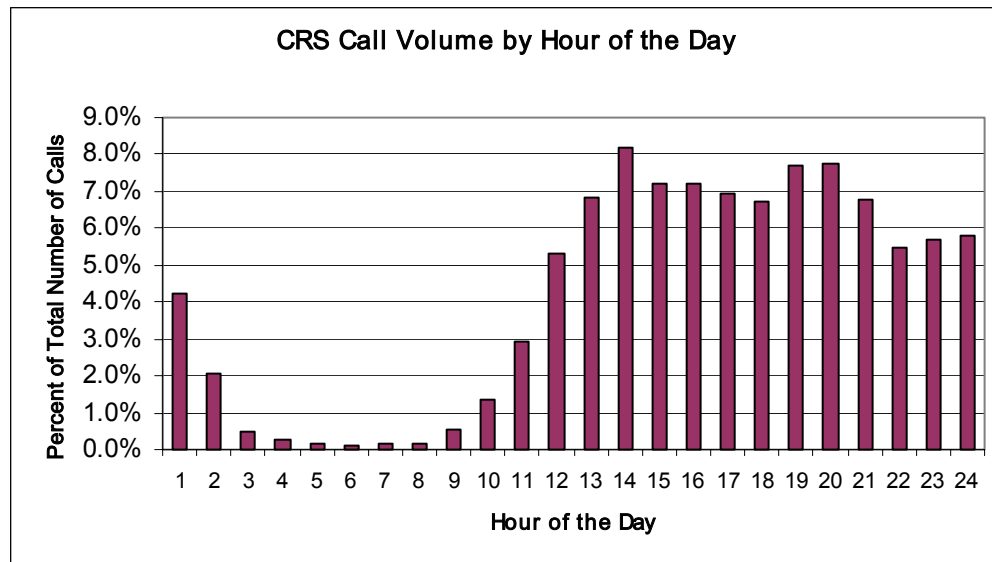
The annual outbound CRS call volumes for TTY, voice and ASCII calls has until recently, grown steadily since the service began in 1987. The number of completed outbound calls for the most recent four years are shown below.

<u>Year</u>	<u>California Intrastate</u>	<u>Interstate & International</u>	<u>Total Number of Outbound Calls</u>
1997	6,482,897	743,139	7,226,036
1998	6,562,827	749,048	7,311,875
1999	6,283,892	798,039	7,081,931
2000	6,077,756	1,057,029	7,134,785

Note that only approximately 79% of all outbound calls are completed and therefore billable.

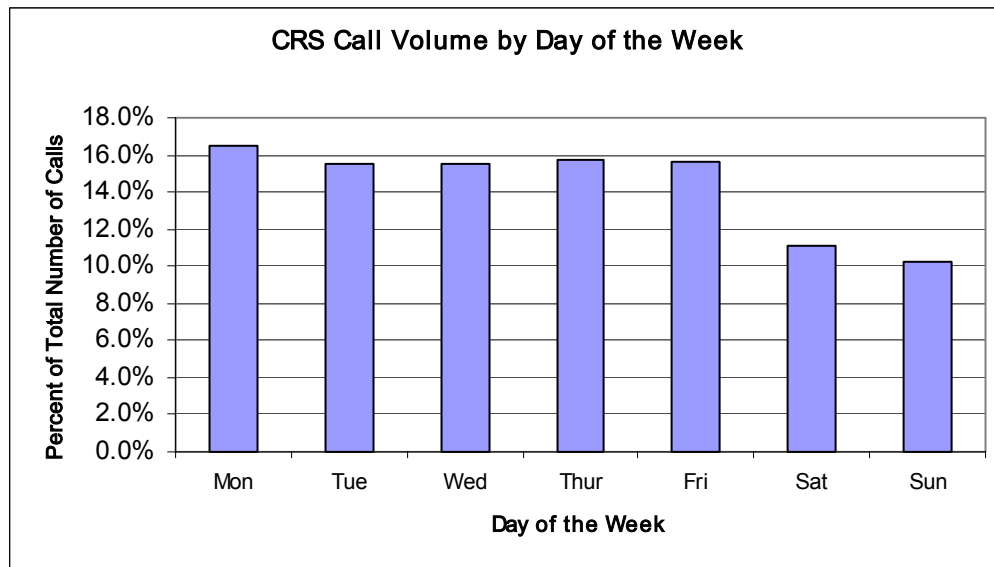
3.4.3. CRS Use by Time of Day and Day of Week

Sprint reports the distribution of CRS calls by hour of the day of a sample



month as:

Sprint reports the distribution of CRS calls by day of the week of a sample



month as:

3.4.4. CRS Minutes of Use

The average billable CRS minutes for years since 1996 for CRS is based on conversation minutes, not on session minutes. A conversation minute is the time that the relay agent is relaying a conversation. It includes the time the calling party is connected to the called party or to an answering machine at the called party's number. A conversation minute does not include time in queue (call is ringing, waiting for a live answer), call set-up, call wrap-up, or calls that reach numbers that are busy or receive no answer or receive intercept messages for the called number. Annual CRS conversation minutes are shown in the table on the following page. (Note that the total number of network minutes of use is greater than the number of conversation minutes because network usage is for both inbound and outbound calls.)

<u>Year</u>	<u>California Intrastate</u>	<u>Interstate & International</u>	<u>Total Completed Conversation Minutes</u>
1996	n/a	n/a	29,403,880
1997	23,496,544	3,568,204	27,064,748
1998	22,324,836	4,220,553	26,545,389
1999	20,835,841	4,429,464	25,265,305

2000	20,251,644	4,565,173	24,815,817
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In the above table, toll free and 900 number TRS calls are distributed 40% as intrastate and 60% as interstate, following the estimate established by the National Exchange Carrier Association (NECA).

Note that the recent decline in California intrastate CRS usage is not matched by either California's Interstate usage or by Interstate usage patterns nationally. NECA reports the following TRS completed, i.e., billable, conversation minutes of use nationwide (including California) for interstate, international, toll-free and 900 number TRS calls, and continues to forecast annual growth in TRS usage as follows:³

<u>Year</u>	<u>NECA reported minutes of use</u>
1997	30,147,318
1998	32,146,698
1999	34,456,873
2000	38,366,793
<i>NECA Forecast:</i>	2001 39,250,679
<i>NECA Forecast:</i>	2002 40,674,604

Total CRS session minutes for years 1996 through 2000 are shown below. Session minutes are the total minutes that the relay agents are involved on all calls, inbound and outbound, including call setup and wrap-up time. Session minutes are a measure of agent call activity, not a measure of call durations. (Note that the total number of network minutes of use is greater than the number of session minutes because network usage is for both inbound and outbound calls.)

<u>Year</u>	<u>Total Session Minutes</u>
1996	35,336,725
1997	38,676,035
1998	38,194,690
1999	36,843,415

³ Toll free and 900 number TRS calls originating within the states are allocated 60% to NECA (i.e., are included within these figures) and 40% to the states.

2000 35,239,854

3.4.5. Average length of calls

The average length of non-STS CRS calls is reported by MCI to be 4.12 conversation minutes for the inbound call and 3.34 conversation minutes for the outbound call. The average length of non-STS CRS calls is reported by Sprint to be 5.13 conversation minutes for the inbound call and 3.57 conversation minutes for the outbound call.

The average length of non-STS CRS calls is reported by MCI to be 6.00 session minutes for the inbound call and 4.87 session minutes for the outbound call. The average length of non-STS CRS calls is reported by Sprint to be 7.04 session minutes for the inbound call and 4.89 session minutes for the outbound call.

Average call lengths are reported to be longer for inbound calls than outbound because some inbound calls result in multiple outbound calls.⁴

3.4.6. Speech to Speech call detail

Presently only MCI offers Speech-To-Speech for CRS.

The DDTP has collected call statistics for STS since the beginning of the trial in June of 1996. The table below presents the annual STS data from 1997 through 1999 (data for December 1997 and January 1998 have been estimated.)

<u>Year</u>	<u>Number of Inbound Calls</u>	<u>Number of Outbound Calls</u>	<u>Session Minutes</u>	<u>Conversation Minutes</u>
1997	17,764	44,833	236,892	n/a
1998	27,163	51,215	371,090	208,004
1999	29,712	54,378	385,380	209,621
2000	31,807	54,744	365,109	196,316

3.5. FUNDING AND REIMBURSEMENT

3.5.1. CRS Vendor Reimbursement

The DDTP currently pays its CRS vendors (MCI and Sprint) monthly for all calls placed between parties within the State of California (intra-state) calls. The present DDTP master contract reimbursement rate is \$1.350 per

⁴ Data reported in this section is from MCI's and Sprint's April 2001 traffic reports.

conversation minute for all intra-state CRS calls other than speech-to-speech. At the current STS call volume levels, intra-state STS calls are presently reimbursed by the DDTP under the current master contract at \$2.700 per session minute.

The FCC has authorized the National Exchange Carrier Association (NECA) to administer the FCC's TRS fund and to reimburse TRS vendors for all inter-state and international calls at the rate of \$1.309 per TTY conversation minute and \$2.620 per STS conversation minute through June 30, 2002. The proposed NECA reimbursement rates for July 2002 through June 2003 are \$1.528 per TTY conversation minute and \$4.045 per STS conversation minute. NECA estimates the increase for the following year at 5.5%. Although NECA also reimburses providers of Video Relay Services (VRS) at a rate of \$7.449 per conversation minute through June 2002 for all VRS calls (intra- and inter-state), VRS is not included in the DDTP's present CRS contracts. The proposed NECA VRS reimbursement rate for July 2002 through June 2003 is \$17.044 per VRS conversation minute. In April of 2002 the FCC approved reimbursement of IP relay (web chat relay) with a proposed NECA rate for July 2002 through June 2003 of \$1.528 per conversation minute. IP relay is not a part of the DDTP's current CRS contracts. NECA also reimburses, at the appropriate rate, sixty percent of all CRS TTY and STS conversation minutes when the outbound call is to an 800 or 900 number. The DDTP reimburses the CRS vendor for the remaining forty percent at the DDTP's per minute rates. NECA rates are adjusted annually.

The DDTP's rates are established through contract. All reimbursement rates are for complete service reimbursement; that is, for the inbound 800 number service, for the call center relay function, for carrying the outbound call, for customer billing, and for all related service and performance requirements. All TRS providers desiring NECA reimbursement are required to provide cost information to NECA for each TRS center they operate. The NECA rates are established based on an average of those costs (including an allowance for a profit factor).⁵ The analysis is performed by NECA and the resulting rates are approved by the FCC. The total DDTP reimbursement to MCI and Sprint for the year 2000 was \$22.1 million. The total NECA reimbursement to MCI and Sprint for CRS calls for the year 2000 is estimated to be approximately \$6.0 million.⁶

⁵ The NECA TTY rate analyses for the year 2000 and forecast for 2001/2002 was based on the costs and traffic volumes of 31 TRS call centers. The year 2000 NECA rate for STS was established using a total of four STS call centers, eliminating the costs and traffic of the lowest cost center. The proposed year 2001/2002 NECA rate for STS was established using a total of ten STS call centers (with none eliminated.) The year 2000 NECA rate for VRS was established using three call centers supplying cost data equivalent to approximately \$3.642, \$5.008, and \$7.595 per VRS conversation minute. The proposed 2001/2002 NECA VRS rate is based on a weighted average of three VRS call centers supplying cost data equivalent to \$2.195, \$2.117, and \$17.536 per VRS conversation minute.

⁶ The \$6.0 million is an estimate because NECA does not release actual cost or reimbursement figures for individual TRS providers or their call centers.

Because NECA reimburses relay providers for interstate and international relay calls, relay providers have also established national 800 numbers used exclusively for interstate and international relay calls. Relay services provided through these national 800 numbers are not under contract to any state. The relay providers of these numbers advertise these numbers in multiple states hoping to attract interstate and international traffic away from other state relay providers. Both of California's relay providers, MCI and Sprint, as well as other relay providers such as AT&T, Hamilton and SBC, have these national relay numbers. It is not known how much relay traffic is placed over these

national numbers, nor is it known how much money these providers receive from NECA for relay calls placed through these national numbers.

In addition, MCI and Sprint bill the CRS caller (either directly or through the caller's local exchange company) for all intra-state CRS outbound calls carried by them according to rates established under contract. All such funds collected by MCI and Sprint are required to be passed on to the DDTP. Both MCI and Sprint discount the cost of their calls to CRS callers. MCI provides a 75% discount off of its tariffed rates for all intrastate calls, and 15% off of its tariffed rates for interstate calls. Sprint also provides a 75% discount off of its tariffed rates for all intrastate calls, but provides 50% off of its tariffed rates for interstate calls. In addition, both MCI and Sprint offer free "local" calls that are 40 miles or less between the caller and the relay called party. The total collected charges returned to the DDTP for the year 2000 was \$78,890. If the caller requests a different outbound carrier with the necessary interconnection arrangements with the CRS vendor, and if the outbound call is passed to that other carrier, neither the CRS vendor nor the other carrier need remit end user charges to the DDTP.

Under the current contract, reimbursement is also offset by liquidated damages that may be assessed for poor quality of service as measured by the daily average speed of answer (ASA) and daily blockage rate. Liquidated damages may be assessed at a rate of \$2,000 per day plus an additional increment tied to the total minutes billed for that day when the average daily speed of answer exceeds seven seconds. Liquidated damages may be assessed at a rate of \$2,000 per day plus an additional increment tied to the total minutes billed for that day for each day that 1% or more of all calls to CRS receive a busy signal.

3.5.2. Funding

The DDTP CRS reimbursement funds come from a surcharge paid by California telephone ratepayers as codified in California Public Utilities Code section 2881 et seq. The surcharge applied has a present statutory limit of one-half of one percent (0.5%) on all intra-state telephone service (other than one-way radio paging and universal telephone service.) The funds are currently held in a designated Trust Fund, which by statute, will be transferred to the California State Treasury, for payment for all DDTP program costs. The surcharge appears on California ratepayers' telephone bills as "CA Relay Service and Communications Devices Funds" or similar designation.

The NECA reimbursements are funded through a shared funding mechanism implemented by the FCC in 1993. NECA, the FCC's TRS Fund Administrator, collects funds from approximately 5,000 companies, and disburses payments to the twelve providers that offer interstate TRS in 50 states, the District of Columbia, Puerto Rico and the U.S. Virgin Islands. Relay providers report their interstate minutes monthly for reimbursement. The estimated fund allocation for payment to TRS providers for the calendar year 2000 is \$47.4 million. The estimated fund payments for July 2001 through June 2001 is forecast at \$65.94 million, plus \$5.45 million for a national 711 awareness campaign expected to occur in late 2001 and early 2002. Information about the TRS fund, cost analysis methodology, national TRS usage, and reimbursement rates can be found at www.neca.org/trs.htm#trsfun.

3.6. ADDITIONAL STANDARDS AND REQUIREMENTS

In addition to the types of relay services described previously in section 3, the current master contract includes additional technical, operational and functional standards as well as reporting requirements.

Exhibit 3A, Organizations/Resources

Deaf Community:

National Association for the Deaf www.nad.org/
Telecommunications for the Deaf www.tdi-online.org/
History Through Deaf Eyes..... <http://depts.gallaudet.edu/deafeyes/>
Deaf Resource Library www.deaflibrary.org/
Deafness and Hearing Loss <http://deafness.about.com/>
Deaf Counseling, Advocacy and Referral Agency..... www.dcara.org/

Late Deafened Adults:

Association of Late Deafened Adults www.alda.org/
The Deafened People Page www.deafened.org/

Hard of Hearing Community:

Self Help for Hard of Hearing People www.shhh.org/
Hearing Loss Web..... www.hearinglossweb.com/

Blind Community:

American Foundation for the Blind www.afb.org/
Rose Resnick Foundation for the Blind www.lighthouse-sf.org/

Deaf-Blind Community:

National Federation for the Blind, Deaf-Blind Division www.nfb-db.org/
Deaf-Blind Perspectives www.tr.wou.edu/tr/dbp/
Helen Keller National Center www.helenkeller.org/national/index.htm
National Technical Assistance Consortium..... www.tr.wou.edu/ntac/

Speech Disabled Community:

Speech-to-Speech News <http://stsnews.com/>
American Speech-Language-Hearing Association www.asha.org/
Speech to Speech Relay Information www.asha.org/takeaction/Speech-to-Speech-Relay.cfm

Community Access and Technology:

Alliance for Technology Access..... www.ataccess.org/
Gallaudet University's Technology Access Program <http://tap.gallaudet.edu/>
Telecommunications Equipment Distribution Program Association <http://www.tedpa.org/>

Registry of Interpreters for the Deafwww.rid.org/